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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

**Draft 9/20/02**

**REISSUANCE**

PART I

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Permit No. MI-0054640-2

**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, the Grand Traverse Band of Ottawa and Chippewa Indians is authorized by the United States Environmental Protection Agency (EPA), Region 5, to discharge from a treatment facility designated as Peshawbestown Wastewater Treatment Plant, located on the Grand Traverse Indian Reservation, Putnam Road, Suttons Bay, Michigan, Leelanau County, the N.E. quarter of the SW quarter of Section 2, Township 30N, Range 11W), to a Grand Traverse Bay, in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III hereof.

This permit and the authorization to discharge shall expire at midnight, October 31, 2007. The permittee shall not discharge after the above date of expiration. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by EPA no later than 180 days prior to the above date of expiration.

This permit shall become effective on the date of signature.

Signed and Dated \_\_\_\_\_, 2002.

\_\_\_\_\_  
Director, Water Division

**Treatment Facility Description:**

The application and plans indicate that the permittee operates a 0.12 mgd Sequencing Batch Reactor (SBR) system with phosphorus removal followed by ultraviolet disinfection. Solids from the SBR unit are wasted to two (2) aerobic digesters. From the digesters, the sludge is land applied by a private contractor to farmland. The discharge is continuous to Grand Traverse Bay.

Wastewater is from domestic sources only, including a casino and hotel.

**A. Final Effluent Limitations**

From the Effective Date of the permit until the Expiration Date, the permittee is authorized to discharge from Outfall 001. Such discharge shall be limited and monitored by the permittee as specified below and in Part I.B. Load limits were computed using a design flow of 0.12 mgd.

**Discharge Limitations**

<u>Effluent Parameter</u>	<u>30-Day Average During Discharge</u>			<u>7-Day Average During Discharge</u>	
	mg/L <sup>a</sup>	lbs/d <sup>b</sup>	% Removal	mg/L	lbs/d
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )	12	12.1	85%	20	20.0
Total Suspended Solids	15	15	85%	22.5	22.5
Fecal Coliform <sup>c</sup>	200 orgs/100 ml				
E. coli	Report				
pH	6 S.U. (minimum) - 9 S.U. (maximum)				
Total Phosphorus	1.0				
Dissolved Oxygen	4.0 (Daily Minimum)				
Ammonia	Report				
Total Mercury	Report				

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not contain oil or other substances in amounts sufficient to create a visible sheen on the surface of the receiving waters.

<sup>a</sup> mg/L = milligrams per liter

<sup>b</sup> lbs/d = pounds per day

<sup>c</sup> Geometric Mean (See Part II, Section E.7.b).

## B. Influent Monitoring Requirements

<u>Parameter</u>	<u>frequency</u>	<u>sample type</u>	<u>notes</u>
Flow	daily	continuous	
CBOD <sub>5</sub>	Monthly	24 hour composite	(2)
BOD <sub>5</sub>	2 x Weekly	24 hour composite	(2)
TSS	2 x Weekly	24 hour composite	(2)
pH	2 x weekly	grab	(1) (2)

## Effluent Monitoring Requirements

<u>Parameter</u>	<u>frequency</u>	<u>sample type</u>	<u>notes</u>
Flow	daily	continuous	
CBOD <sub>5</sub>	2 x Weekly	24 hour composite	(2)
TSS	2 x weekly	24 hour composite	(2)
Fecal Coliform	2 x Weekly	grab	(2)
D.O.	2 x Weekly	grab	(1) (2)
pH	2 x Weekly	grab	(1) (2)
Ammonia	2 x Weekly	24 hour composite	(2)
Phosphorus	2 x Weekly	24 hour composite	(2)
E. coli	2 x Weekly	grab	(2) (3)
Mercury	Monthly	24 hour composite	(2) (4)

- NOTES: (1) Analyze immediately.
- (2) Samples shall be taken on alternating days including Saturday and Sunday if an operator is present.
- (3) EPA is moving in the direction of using E. coli, which is a better indicator of recreational suitability, instead of fecal coliform. The 30-day average limit for E. coli, based on EPA's water quality criteria, would be 126 E. coli/100 ml. The permittee is to use this permit term to determine if the facility is capable of complying with the projected E. coli limit using the existing treatment. Based on comparison monitoring, if it is shown that additional treatment is needed to comply with the projected limit, the additional treatment shall be in place prior to the issuance of the next permit or a request for a variance for the projected limit shall be submitted with the permit renewal application. The analytical method that should be used is the *Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and Escherichia coli* (EPA/821/R-97/004, March 2000).
- (4) Total Mercury testing requirements: The analytical protocol for Total Mercury shall be in accordance with EPA Method 1631. The quantification level for Total Mercury 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the EPA at the address listed under C. Special Conditions 2.

The use of clean technique sampling procedures is strongly recommended. Guidance for clean technique is contained in: EPA Method 1669, *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels (Sampling Guidance)*, EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to the EPA upon request.

**C. Special Conditions**

1. Representative samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.
2. Reporting - The permittee shall record all monitoring results required by Part I.A. and Part I. B. on Discharge Monitoring Report (DMR) forms.

The DMR forms shall be mailed to EPA, and a copy mailed to the MDEQ\*, on a quarterly basis, and postmarked no later than the 21st day of the month following the quarter for which the monitoring was completed. The permittee shall retain a copy of all reports submitted. All reports shall be mailed to:

U.S. Environmental Protection Agency  
Water Division  
Water Enforcement & Compliance Assurance Branch  
Attention: Branch Chief - WC-15J  
77 West Jackson Boulevard  
Chicago, Illinois 60604

Michigan Department of Environmental Quality  
Attention: Cadillac District Office  
8015 Mackinaw Trail  
Cadillac, Michigan 49601

**\*Sending DMR forms to MDEQ is not a permit requirement. EPA requests that the permittee send copies to the MDEQ as a courtesy.**

3. The treatment plant shall be operated by a Michigan-certified operator for the class of wastewater treatment provided. EPA believes the facility would be rated Class B using Michigan's guidelines. If the permittee chooses to meet any of the certification requirements by entering into a contractual agreement with a properly certified operator, a copy of the contract shall be submitted to EPA. The permittee shall notify EPA, in writing, of any changes in certification or contract status within 30 days of the change.
4. If the permittee wishes to change from ultraviolet disinfection to some other type of disinfection (e.g. chlorine), the permittee must notify EPA and receive approval from EPA prior to changing methods. The permit may have to be modified to include additional requirements.
5. Industrial Waste Pretreatment Program
  1. The permittee shall have legal authority and necessary inter-jurisdictional agreements that provide the basis for implementation and enforcement to enable it to ensure compliance by industrial users (IU's) with pretreatment standards and requirements.

2. Under no circumstances shall the permittee allow the introduction of the following wastes into the waste treatment system:
- a. Pollutants which cause, in whole or in part, the permittee's failure to comply with any condition of this permit or the Clean Water Act;
  - b. Pollutants which restrict, in whole or in part, the permittee's ability to comply with applicable sludge management and disposal requirements;
  - c. Pollutants which cause, in whole or in part, operational problems at the treatment facility or in its collection system;
  - d. Pollutants which cause pass through or interference;
  - e. Pollutants which create a fire hazard or explosion hazard in the sewerage system, including, but not limited to wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
  - f. Pollutants which will cause corrosive structural damage to the sewerage system; but in case, discharges with pH less than 5.0 S.U., unless the works is specifically designed to accommodate such discharges;
  - g. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the sewerage system resulting in interference;
  - h. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment plant;
  - i. Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference; but in no case, heat in such quantities that the temperature at the treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the EPA Region 5 Water Division Director, upon request of the permittee, approves alternate temperature limits;
  - j. Pollutants which result in the presence of toxic gases, vapor or fumes within the sewerage system in a quantity that may cause acute worker health and safety problems;
  - k. Any trucked or hauled pollutants, except at discharge points designated by the permittee;

1. Pollutants which violate categorical standards identified in 40 CFR Chapter I, Subchapter N; and
- m. Pollutants which violate local limits established in accordance with 40 CFR 403.5(c).
3. The permittee shall maintain a list of its non domestic users that meet the criteria of a significant industrial user (SIU) as identified in 40 CFR 403.3(t).
4. The permittee shall impose pretreatment requirements on SIUs which will ensure compliance with all applicable effluent limitations and other requirements set forth in this permit, or any applicable federal, state, or local law or regulation. These requirements shall be applied to SIUs by means of an individual control mechanism.
5. The permittee shall obtain from SIUs specific information on the quality and quantity of the SIU's discharges to the permittee's POTW. Except where specifically requested by the permittee and approved by EPA Region 5, this information shall be obtained by means representative monitoring conducted by the permittee or by the SIU under requirements imposed by the permittee in the SIU's individual control mechanism. Monitoring performed to comply with this requirement shall include all pollutants for which the SIU is significant and shall be done at a frequency commensurate with the significance of the SIU, but shall not be less than annually. Each SIU shall be inspected at least annually.
6. In addition to the sludge land application requirements in Part III of the permit, the following requirements also apply to the permittee;
  - a. The following sites shall be used for the land application of sewage sludge by the permittee. All property is owned by Cherry Bay Orchards.

Site Name	Site Area and Location
Site 1 referred to as Kalchik Apples	155 acres Section 8 Suttons Bay Township Leelenau County, Michigan T-30-N, R-11W
Site 2 referred to as Ance	69 acres Section 5 Suttons Bay Township, Leelenau County, Michigan, t-30-N. R-11W
Site 3 referred to as Vingsnea Tarts	140 acres Section 4 Suttons Bay Township, Leelenau County, Michigan T-30-N, R 11W
Site 4 referred to as Solem/Solar	142 + 72 acres Sections 3 and 4 Suttons Bay Township, Leelenau County, Michigan T-30-N, R-11W
Sit 5 referred to as Nelson	75 + 24 acres Sections 5 and 8 Suttons Bay Township, Leelenau County, Michigan, T-30-N, R-11W

- b. If the permittee wishes to use additional sites not identified in the permit application prior to the expiration date of this permit, the permittee shall submit a request to the Chief of the NPDES Programs Branch containing the information listed in 1 through 5 below. Upon receipt of the information, the permit may be modified with public notice.
1. certification that the application contractor has received all necessary information to comply with applicable provisions of 40 CFR Part 503;
  2. Site location by latitude and longitude, and code number to identify field or field portion.
    - Plat map showing location of the site relative to local landmarks.
    - Proximity to surface waters of the United States.
    - Potential presence of endangered species.
    - Soil fertility test with fertilizer recommendations.
    - Previous crop and future crop with yield goal.
    - Participation Agreement signed by the landowner or operator, if different, of the site to receive sludge.
    - Determination whether the site has previously been used for sewage sludge applications.
    - If previously used, determination of cumulative pollutant loading rate since July 19, 1993;
  3. certification that the local township supervisor has been notified that a site has been identified and is intended for use;
  4. certification that the County Health Department has been notified that hauling is scheduled to take place; and
  5. certification that notice has been provided to landowners and occupants adjacent to, or abutting the proposed land application site. Such notice shall be accomplished by one of the following: written notice through the regular mail; public notice in the local newspaper; public reading of notice at open local public meeting.
- c. Duty to Mitigate. The permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this permit.



- d. If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or Part 503, the results of this monitoring shall be included in the reporting of data submitted to the Agency.
  - e. The permittee shall comply with existing federal regulations governing sewage sludge disposal.
  - f. The permittee shall comply with standards for sewage sludge use or disposal established under Section 405(d) of the Act within the time provided in the regulations that establish the standards for sewage sludge use or disposal even if the permit has not been modified to incorporate the requirement.
  - g. The permittee shall ensure that the applicable requirements in 40 CFR Part 503 are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.
7. As a condition of this permit, the permittee shall monitor the discharge from monitoring point 001 for the constituents listed below. This monitoring is an application requirement of 40 CFR 122.21(j), effective December 2, 1999. Testing shall be conducted in **March, 2003, May, 2004, July, 2005, and September, 2006**. Grab samples shall be taken for Oil and Grease. For all other parameters, 24-hour composite samples shall be taken. This information shall be submitted with the permit renewal application.

Total Kjeldahl Nitrogen (TKN)  
Nitrate plus Nitrite Nitrogen  
Oil and Grease  
Total Dissolved Solids (TDS)

**PART II**  
**STANDARD CONDITIONS FOR NPDES PERMITS**

**SECTION A. GENERAL CONDITIONS**

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violation of Permit Conditions

The Permit Issuing Authority will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (Federal Register: December 31, 1996, Volume 61, Number 252, pages 69359-69366, as corrected, March 20, 1997, Volume 62, Number 54, pages 13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every four years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties listed below were adjusted for inflation starting in 1996.

**a. Criminal**

(1) Negligent Violations The Act provides that any person who negligently violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

(2) Knowing Violations The Act provides that any person who knowingly violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

(3) Knowing Endangerment The Act provides that any person who knowingly violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

**b. Civil Penalties** - The Act provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$27,500 per day for each violation.

**c. Administrative Penalties** - The Act provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

(1) Class I penalty Not to exceed \$11,000 per violation nor shall the maximum amount exceed \$27,500.

(2) Class II penalty Not to exceed \$11,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$137,500.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

#### 4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, terminated or revoked for cause (as described in 40 CFR 122.62 et. seq) including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any conditions that requires either temporary interruptions or elimination of the permitted discharge; or
- d. Information newly acquired by the Agency indicating the discharge poses a threat to human health or welfare.

If the permittee believes that any past or planned activity would be cause for modification or revocation and reissuance under 40 CFR 122.62, the permittee must report such information to the Permit Issuing Authority. The submittal of a new application may be required of the permittee. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

#### 5. Toxic Pollutants

Notwithstanding Paragraph A-4, above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" Part II, Section B, Paragraph B-3, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

#### 7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

#### 8. State/Tribal Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act.

9. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringement of Federal, State, Tribal, or local laws or regulations.

10. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any waters of the United States.

11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

12. Duty to Provide Information

The permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Permit Issuing Authority, upon request, copies of records required to be kept by this permit.

13. Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee may submit a request to the Regional Administrator for an evidentiary hearing under Subpart E, or a formal hearing under Subpart F, of 40 CFR Part 124, to reconsider or contest that decision. The request for a hearing must conform to the requirements of 40 CFR §124.74.

**SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit.

3. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass means the intentional diversion of waste streams from any portion of a treatment facility, which is not a designed or established operating mode for the facility.

- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraph c. and d. of this section.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten 10 days before the date of the bypass, including an evaluation of the anticipated quality and effect of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-8 (24-hour notice).

d. Prohibition of bypass.

- (1) Bypass is prohibited and the Permit Issuing Authority may take enforcement action against a permittee for bypass, unless:
  - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (b) There was no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  - (C) The permittee submitted notice as required under Paragraph c. of this section.
- (2) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph d. (1) of this section.

4. Upsets

"Upsets" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonably control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit limitation if the requirements of 40 CFR 122.41(n) (3) are met.

5. Removed Substances

This permit does not authorize discharge of solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewater to waters of the United States unless specifically limited in Part I.

**SECTION C. MONITORING AND RECORDS****1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority.

**2. Flow Measurements**

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than  $\pm 10$  percent from the true discharge rates throughout the range of expected discharge volumes. Once-through condenser cooling water flow which is monitored by pump logs, or pump hours meters as specified in Part I of this permit, and based on the manufacturer's pump curves, shall not be subject to this requirement. Guidance in selection, installation, calibration, and operation of acceptable flow measurements devices can be obtained from the following references:

- (1) "A Guide of Methods and Standards for the Measurement of Water Flow", U.S. Department of Commerce, National Bureau of Standards, and Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
- (2) "Water Measurement Manual", U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by Catalog No. 127.19/2:W29/2, Stock No. S/N 24003-0027.)
- (3) "Flow Measurement in Open Channels and Closed Conduits", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
- (4) "NPDES Compliance Flow Measurement Manual", U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MOD-77, September 1981, 135 pp. (Available from the General Services Building 41, Denver Federal Center, Denver, CO 80225.)

**3. Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

**4. Penalties for Tampering**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both. (See Section 309(c) (4) of the Clean Water Act).

#### 5. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by the Permit Issuing Authority at any time.

#### 6. Records Contents

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

#### 7. Inspection and Entry

The permittee shall allow the Permit Issuing Authority, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times the facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

### **SECTION D. REPORTING REQUIREMENTS**

#### 1. Change in Discharge

The permittee shall give notice to the Permit Issuing Authority, as soon as possible, of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source; or

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PART II

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- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D, Paragraph D-10(a).

## 2. Anticipated Noncompliance

The permittee shall give advance notice to the Permit Issuing Authority of any planned change in the permitted facility or activity which may result in noncompliance with permit requirements. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Permit Issuing Authority.

## 3. Transfer of Ownership or Control

A permit may be automatically transferred to another party if:

- a. The permittee notifies the Permit Issuing Authority of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them, and
- c. The Permit Issuing Authority does not notify the existing permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.

## 4. Monitoring Reports

See Part I.C.2 of this permit.

## 5. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of this data submitted in the Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated.

## 6. Averaging of Measurements

Calculations for limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Permit Issuing Authority in the permit.

## 7. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule data. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.



#### 8. Twenty-Four Hour Reporting

The permittee shall orally report any noncompliance which may endanger health or the environment, within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Permit Issuing Authority may verbally waive the written report, on a case-by-case basis, when the oral report is made.

The following violations shall be included in the 24-hour report when they might endanger health or the environment.

- a. An unanticipated bypass which exceeds any effluent limitation in the permit
- b. Any upset which exceeds any effluent limitation in the permit.

#### 9. Other Noncompliance

The permittee shall report, in narrative form, all instances of noncompliance not previously reported under Section D, Paragraphs D-2, D-4, D-7, and D-8 at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D-8.

#### 10. Changes In Discharges of Toxic Substances

The permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not listed in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) One hundred micrograms per liter (100 ug/L);
  - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2, 4-dinitrophenol and for 2 methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony; or
  - (3) Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application.
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) Five hundred micrograms per liter (500 ug/L);
  - (2) One milligram per liter (1 mg/L) for antimony; or
  - (3) Ten (10) times the maximum concentration value reported for that pollutant(s) in the permit application.

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PART II

Page II-9

Permit No.MI-0054640-2

11. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit. The Permit Issuing Authority may grant permission to submit an application less than 180 days in advance but not later than the permit expiration date.

Where EPA is the Permit Issuing Authority, the terms and conditions of this permit are automatically continued in accordance with 40 CFR 122.6, only where the permittee has submitted a timely and sufficient application for a renewal permit and the Permit Issuing Authority is unable through no fault of the permittee to issue a new permit before the expiration date.

12. Signatory Requirements

All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified.

a. All permit applications shall be signed as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision making functions for the corporation, or
- (2) the manager of one manufacturing production or operating facility employing more than 250 persons or having gross annual sales of expenditures exceeding 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- (3) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (4) For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official.

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described above or by a duly authorized representative of that person. A person is duly authorized representative only if:

- (1) The authorization is made in writing by a person described above;
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- (3) The written authorization is submitted to the Permit Issuing Authority.

- c. Certification. Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachment were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including, the possibility of fine and imprisonment for knowing violations."

13. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Permit Issuing Authority. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

14. Penalties for Falsification of Reports

The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under the Act, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both. (See Section 309(c)(4) of the Clean Water Act).

**SECTION E. DEFINITIONS**

1. Permit Issuing Authority

The Regional Administrator of EPA Region 5 or his designee, unless at some time in the future the Tribe receives authority to administer the NPDES program and assumes jurisdiction over the permit; at which time, the Director/Chairman of the Tribal program receiving authorization becomes the issuing authority.

2. Act

"Act" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.

3. Mass/Day Measurements

- a. The "30-day average discharge" is defined as the total mass of all daily discharges sampled and/or measured during a consecutive 30 day period on which daily discharges are sampled and measured, divided by the number of daily discharges samples and/or measured during such period. It is therefore, an arithmetic mean found by adding the weights of the pollutant found each day of the consecutive 30 day period and then dividing this sum by the number of days the tests were reported. The limitation is identified as "Daily Average" or "30-day Average" in Part I of the permit and the average monthly discharge value is reported in the "Average" Column under "Quantity" on the Discharge Monitoring Report (DMR).

- b. The "7-day average discharge" is defined as the total mass of all daily discharges sampled and/or measured during a consecutive 7 day period on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such period. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the consecutive 7 day period and then dividing this sum by the number of days the tests were reported. This limitation is identified as "7-day Average" in Part I of the permit and the highest average weekly discharge value is reported in the "Maximum" column under "Quantity" on the DMR.
- c. The "maximum daily average" is the total mass (weight) of a pollutant discharge during a calendar day. If only one sample is taken during any calendar day, the weight of pollutant calculated from it is the "maximum daily discharge". This limitation is identified as "Daily Maximum", in Part I of the permit and one highest such value recorded during the reporting period is reported in the "Maximum" column under "Quantity" on the DMR.
- d. The "average annual discharge" is defined as the total mass of all daily discharges sampled and/or measured during the calendar year on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such year. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the year and then dividing the sum by number of days the test were reported. This limitation is defined as "Annual Average" in Part I of the permit and the average annual discharge value is reported in the "Average" column under "Quantity" on the DMR. The DMR for this report shall be submitted in January for the previous reporting calendar year.

#### 4. Concentration Measurements

- a. The "30-day average concentration", other than for fecal coliform bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a consecutive 30 day period on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such period (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during a calendar day. The 30-day average count for fecal coliform bacteria is the geometric mean of the counts for samples collected during a consecutive 30 day period. This limitation is identified as "30-day Average" or "Daily Average" in Part I of the permit and the average monthly concentration value is reported under the "Average" column under "Quality" on the DMR.
- b. The "7-day average concentration", other than for fecal coliform bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a consecutive 7 day period on which daily discharges are sampled and measured divided by the number of daily discharges sampled and/or measured during such period (arithmetic mean of the daily concentration value). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during that calendar day. The 7-day average count for fecal coliform bacteria is the geometric mean of the counts for samples collected during a consecutive 7 day period. This limitation is identified as "7-day Average" in Part I of the permit and the highest 7-day average concentration value is reported under the "Maximum" column under "Quality" on the DMR.

- c. The "maximum daily concentration" is the concentration of a pollutant discharge during a calendar day. It is identified as "Daily Maximum" in Part I of the permit and the highest such value recorded during the reporting period is reported under the "Maximum" column under "Quality" on the DMR.
- d. The "average annual concentration", other than for fecal coliform bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a calendar year on which daily discharges are sampled and measured divided by the number of daily discharges sampled and/or measured during such year (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all samples collected during that calendar day. The average yearly count for fecal coliform bacteria is the geometric mean of the counts for samples collected during a calendar year. This limitation is identified as "Annual Average" in Part I of the permit and the average annual concentration value is reported under the "Average" column under "Quality" on the DMR. The DMR for this report shall be submitted in January for the previous reporting year.

5. Other Measurements

- a. The effluent flow expressed as M<sup>3</sup>/day (MGD) is the 24 hour average flow averaged monthly. It is the arithmetic mean of the total daily flows recorded during the calendar month. Where monitoring requirements for flow are specified in Part I of the permit the flow rate values are reported in the "Average" column under "Quantity" on the DMR.
- b. An "instantaneous flow measurement" is a measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.
- c. Where monitoring requirements for pH, dissolved oxygen or fecal coliform bacteria are specified in Part I of the permit, the values are generally reported in the "Quality of Concentration" column on the DMR.

6. Types of Samples

- a. Composite Sample: A "composite sample" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over the full time period specified in Part I.A. The composite sample must be flow proportioned by either time interval between each aliquot or by volume as it relates to effluent flow at the time of sampling of total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.
- b. Grab Sample: A "grab sample" is a single influent or effluent portion of at least 100 ml which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the total discharge.

7. Calculation of Means

- a. Arithmetic Mean: The arithmetic mean of any set of values is the summation of the individual values divided by the number of individual values.
- b. Geometric Mean: The geometric mean of any set of values is the N<sup>th</sup> root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

- c. Weighted by Flow Value: Weighted by flow value means the summation of each concentration times its respective flow divided by the summation of the respective flows.

8. Calendar Day

A calendar day is defined as the period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

9. Hazardous Substance

A hazardous substance means any substances designed under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

10. Toxic Pollutant

A toxic pollutant is any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act.

11. Significant Industrial User

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR Part 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR Part 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR Part 403.8(f)(6)).

12. Chief of the NPDES Programs Branch

The Chief of the NPDES Programs Branch of EPA Region 5 is located at the EPA, Region 5 Office, NPDES Programs Branch, WN-16J, 77 West Jackson Boulevard, Chicago, Illinois 60604, telephone: 312-353-2124.

**PART III**  
**SEWAGE SLUDGE REQUIREMENTS**  
**INSTRUCTIONS TO PERMITTEES**

Select only those Sections which apply to your sludge reuse or disposal practice.

If the quality of your sludge varies (for example, Section II and Section III of Element I apply) use a separate Discharge Monitoring Report (DMR) for each Section that is applicable.

The sludge DMRs shall be due by February 19th of each year and shall cover the previous January through December time period.

**The sludge conditions do not apply to wastewater treatment lagoons where sludge is not wasted for final reuse/disposal. If the sludge is not removed, the permittee shall indicate on the DMR "No Discharge".**

**ELEMENT 1 - LAND APPLICATION**

SECTION I:	Page 2 - Requirements Applying to <u>All</u> Sewage Sludge Land Application
SECTION II:	Page 6 - Requirements Specific to Bulk Sewage Sludge for Application to the Land Meeting Class A or B Pathogen Reduction and the Cumulative Loading Rates in Table 2, or Class B Pathogen Reduction and the Pollutant Concentrations in Table 3
SECTION III:	Page 11 - Requirements Specific to Bulk Sewage Sludge Meeting Pollutant Concentrations in Table 3 and Class A Pathogen Reduction Requirements
SECTION IV:	Page 13 - Requirements Specific to Sludge Sold or Given Away in a Bag or Other Container for Application to the Land that does not Meet the Pollutant Concentrations in Table 3
SECTION V:	Page 15 - Definitions

**ELEMENT 1 - LAND APPLICATION****SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION****A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d) (2) of the Clean Water Act. If new limits for Molybdenum are promulgated prior to permit expiration, then those limits shall become directly enforceable.
3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
4. The permittee shall give prior notice to EPA (Chief, NPDES Programs Branch, Water Division, Mail Code WN-16J, EPA Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604-3590), with a courtesy copy to the Saginaw Chippewa Tribe, of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Part 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Part 122.62(a)(1).

**B. Testing Requirements**

1. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Element 1, Section I.C.

**TABLE 1**  
**Ceiling Concentration**

<b>Pollutant</b>	<b>(milligrams per kilogram)*</b>
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis



## 2. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by either the Class A or Class B pathogen requirements. Sewage sludge that is applied to a lawn or home garden shall be treated by the Class A pathogen requirements. Sewage sludge that is sold or given away in a bag shall be treated by Class A pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. All 6 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 503.32(a)(3)(ii) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(iii) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or give away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

- b. Three alternatives are available to demonstrate compliance with Class B sewage sludge.

Alternative 1- (i) Seven random samples of the sewage sludge shall be collected for one monitoring episode at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce Pathogens described in 503 Appendix B.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually approved by the Pathogen Equivalency Committee representing the EPA.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

3. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction. If bulk sewage

sludge is applied to a home garden, or bagged sewage sludge is applied to the land, only alternative 1 through alternative 8 shall be used.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 9 - (i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

All pollutants shall be monitored at the frequency shown below:

Amount of sewage sludge\*

<u>(metric tons per 365 day period)</u>	<u>Frequency</u>
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

\* Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 40 CFR 503.8(b).

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below those listed in Table 3 found in Element I, Section III, the following conditions apply:

1. Pollutant Limits

**Table 2**  
**Cumulative Pollutant Loading Rate**

<u>Pollutant</u>	<u>(kilograms per hectare)</u>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report
Nickel	420
Selenium	100
Zinc	2800

\* Dry weight basis

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Element 1, Section I.B.2.

3. Management Practices

- a. Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.
- b. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the U.S., as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 404 of the CWA.
- c. Bulk sewage sludge shall not be applied within 10 meters of a water of the U.S.
- d. Bulk sewage sludge shall be applied at or below the agronomic rate in accordance with recommendations from the following references:
  - i. STANDARDS 1992, Standards, Engineering Practices and Data, 39th Edition (1992) American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659.
  - ii. National Engineering Handbook Part 651, Agricultural Waste Management Field Handbook (1992), P.O. Box 2890, Washington, D.C. 20013.
  - iii. Recommendations of local extension services or Soil Conservation

Services.

iv. Recommendations of a major University's Agronomic Department.

e. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

- i. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
- ii. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.
- iii. The annual whole sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Element I, Section III below are met.

4. Notification requirements

a. If bulk sewage sludge is applied to land in a State other than the State in which the sludge is prepared, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

- i. The location, by either street address or latitude and longitude, of each land application site.
- ii. The approximate time period bulk sewage sludge will be applied to the site.
- iii. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge.
- iv. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

b. The permittee shall give 60 days prior notice to the Director of any change planned in the sewage sludge practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions, or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR 122.62(a)(1).

c. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Preservation Office within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to

the State Historical Preservation Office prior to use of the site.

The permittee shall within 30 days after notification by the State Historical Preservation Office that a specific sludge disposal/use area will adversely effect a National Historic Site, cease use of such area.

5. Record keeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 40 CFR 503.17 for persons who land apply.

- a. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 found in Element I, Section III and the applicable pollutant concentration criteria (mg/Kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (kg/ha) listed in Table 2 above.
- b. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).
- c. A description of how the vector attraction reduction requirements are met.
- d. A description of how the management practices listed above in Section II.3 are being met.
- e. The recommended agronomic loading rate from the references listed in Section II.3.d. above, as well as the actual agronomic loading rate shall be retained.
- f. A description of how the site restrictions in 40 CFR Part 503.32(b) (5) are met for each site on which Class B bulk sewage sludge is applied.
- g. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14 was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."
- h. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR 503.17(a) (4) (i) (B) or 40 CFR Part 503.17(a) (5) (i) (B) as applicable to the permittees sludge treatment activities.
- i. The permittee shall maintain information that describes future geographical areas where sludge may be land applied.
- j. The permittee shall maintain information identifying site selection criteria regarding land application sites not identified at the time of

permit application submission.

- k. The permittee shall maintain information regarding how future land application sites will be managed.

The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 40 CFR 503.17 for persons who land apply.

- a. The location, by either street address or latitude and longitude, of each site on which sludge is applied.
- b. The number of hectares in each site on which bulk sludge is applied.
- c. The date sludge is applied to each site.
- d. The cumulative amount of each pollutant in kilograms/hectare listed in Table 2 applied to each site.
- e. The total amount of sludge applied to each site in metric tons.
- f. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirement to obtain information in §503.12(e)(2) was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

- g. A description of how the requirements to obtain information in §503.12(e)(2) are met.

6. Reporting Requirements - The permittee shall report annually on the DMR the following information:

- a. Pollutant Table (2 or 3) appropriate for permittee's land application practices.
- b. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee.
- c. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/Kg) listed in Table 3 found in Element 1, Section III, or the applicable pollutant loading rate limit (kg/ha) listed in Table 2 above if it exceeds 90% of the limit.
- d. Level of pathogen reduction achieved (Class A or Class B).
- e. Alternative used as listed in Section I.B.2.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met in the DMR comment section or attach a separate sheet to the DMR.
- f. Vector attraction reduction alternative used as listed in Section



I.B.3.

- g. Annual sludge production in dry metric tons/year.
- h. Amount of sludge land applied in dry metric tons/year.
- i. Amount of sludge transported interstate in dry metric tons/year.
- j. The certification statement listed in 503.17(a) (4) (i) (B) or 503.17(a) (5) (i) (B) whichever applies to the permittees sludge treatment activities shall be attached to the DMR.
- k. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the DMR.
  - i. The location, by either street address or latitude and longitude.
  - ii. The number of hectares in each site on which bulk sewage sludge is applied.
  - iii. The date bulk sewage sludge is applied to each site.
  - iv. The cumulative amount of each pollutant (i.e., kilograms/hectare) listed in Table 2 in the bulk sewage sludge applied to each site.
  - v. The amount of sewage sludge (i.e., metric tons) applied to each site.
  - vi. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirement to obtain information in §503.12(e) (2) was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."
  - vii. A description of how the requirements to obtain information in 40 CFR 503.12(e) (2) are met.

**SECTION III. REQUIREMENTS SPECIFIC TO BULK OR BAGGED SEWAGE SLUDGE MEETING POLLUTANT CONCENTRATIONS IN TABLE 3 AND CLASS A PATHOGEN REDUCTION REQUIREMENTS**

For those permittees with sludge that contains concentrations of pollutants below those pollutant limits listed in Table 3 for bulk or bagged (containerized) sewage sludge and also meet the Class A pathogen reduction requirements, the following conditions apply (Note: All bagged sewage sludge must be treated by Class A pathogen reduction requirements.):

- 1. Pollutant limits - The concentration of the pollutants in the municipal sewage sludge is at or below the values listed.

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report
Nickel	420
Selenium	100
Zinc	2800

\* Dry weight basis

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by the Class A pathogen reduction requirements as defined above in Element I, Section I.B.2. All bagged sewage sludge must be treated by Class A pathogen reduction requirements.

3. Management Practices - None.

4. Notification Requirements - None.

5. Record keeping Requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

- a. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 and the applicable pollutant concentration criteria listed in Table 3.
- b. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 503.17(a)(1)(ii) or 503.17(a)(3)(i)(B), whichever applies to the permittees sludge treatment activities.
- c. A description of how the Class A pathogen reduction requirements are met.
- d. A description of how the vector attraction reduction requirements are met.

6. Reporting Requirements - The permittee shall report annually on the DMR the following information:

- a. Pollutant Table 3 appropriate for permittee's land application practices.
- b. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee.
- c. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) found in Element 1, Section I. In addition, the applicable pollutant concentration criteria listed in Table 3 should be included on the DMR.
- d. Pathogen reduction Alternative used for Class A bagged or bulk sludge as listed in Section I.B.2.a.
- e. Vector attraction reduction Alternative used as listed in Section I.B.3.
- f. Annual sludge production in dry metric tons/year.
- g. Amount of sludge land applied in dry metric tons/year.
- h. Amount of sludge transported interstate in dry metric tons/year.
- i. The certification statement listed in 503.17(a)(1)(ii) or 503.17(a)(3)(i)(B), whichever applies to the permittees sludge treatment activities, shall be attached to the DMR.

**SECTION IV. REQUIREMENTS SPECIFIC TO SLUDGE SOLD OR GIVEN AWAY IN A BAG OR OTHER CONTAINER FOR APPLICATION TO THE LAND THAT DOES NOT MEET THE POLLUTANT CONCENTRATIONS IN TABLE 3**

1. Pollutant Limits

Table 4  
Annual Pollutant Loading Rate

<u>Pollutant</u>	<u>(kilograms per hectare per 365 day period)</u>
Arsenic	2
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Molybdenum	Report
Nickel	21
Selenium	5
Zinc	140

\* Dry weight basis

2. Pathogen Control

All sewage sludge that is sold or given away in a bag or other container for application to the land shall be treated by the Class A pathogen requirements as defined in Section I.B.2.a.

3. Management Practices

Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:

- a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
- b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.
- c. The annual whole sludge application rate for the sewage sludge that will not cause any of the annual pollutant loading rates in Table 4 above to be exceeded.

4. Notification Requirements - None.

5. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years.

- a. The concentration in the sludge of each pollutant listed above in found in Element I, Section I, Table 1.
- b. The following certification statement found in 503.17(a) (6) (iii).

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14(e), the Class A pathogen requirement in §503.32(a), and the vector attraction reduction requirement in (insert vector attraction reduction option) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment".

- c. A description of how the Class A pathogen reduction requirements are met.
- d. A description of how the vector attraction reduction requirements are met.
- e. The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 to be exceeded. See Appendix A to Part 503 - Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge.

6. Reporting Requirements - The permittee shall report annually on the DMR the following information:

- a. List Pollutant Table 4 appropriate for permittee's land application practices.

- b. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee.
- c. The concentration (mg/Kg) in the sludge of each pollutant listed above in Table 1 (defined as a monthly average) found in Element 1, Section I.
- d. Class A pathogen reduction Alternative used as listed in Section I.B.2.a. Alternatives describe how the pathogen reduction requirements are met.
- e. Vector attraction reduction Alternative used as listed in Section I.B.3.
- f. Annual sludge production in dry metric tons/year.
- g. Amount of sludge land applied in dry metric tons/year.
- h. Amount of sludge transported interstate in dry metric tons/year.
- i. The following certification statement found in § 503.17(a)(6)(iii) shall be attached to the DMR.

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14(e), the Class A pathogen requirement in §503.32(a), and the vector attraction reduction requirement in (insert vector attraction reduction option) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment".

#### **SECTION V. DEFINITIONS**

Definitions applicable to Part III can be found at 503.9 and 503.11.